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EXAMINER

ENGLISH, PETER C

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,512

Applicant(s)

LUNT ET AL.

Examiner

Peter C. English

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-63 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20030909; 20050408</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:
 - 110, mentioned at page 16, line 3.
 - 210, mentioned at page 18, line 7.
 - 244, mentioned at page 18, line 17.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:
 - 149, shown in Fig. 5.
 - 249, shown in Fig. 6.
3. The drawings are objected to because:
 - In Fig. 3, the section line labels "A" should be changed to "4".
 - Fig. 3 is inconsistent with Figs. 1 and 2. In Figs. 1 and 2, the reaction beam 52 extends horizontally, but in Fig. 3 it extends vertically.
 - In Fig. 4, the upper occurrence of "58" should be "88".
 - In Fig. 5, the upper occurrence of "158" should be "138".
 - In Fig. 6, the upper occurrence of "258" should be "238".
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or canceled from the claims:
 - A rear panel constructed without any folds (claims 23 and 39).
 - An air bag whose length decreases upon inflation or remains the same (claims 24, 25, 40 and 41). Note that, in Figs. 4-6, the inflated lengths 49a, 149a, 249a are greater than the deflated lengths 49, 149, 249.

A reaction beam that is bowed such that it presses against the rear panel (claims 43 and 55).

No new matter should be entered.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The specification is objected to because:

At page 7, line 6, “A-A” should be “4-4”.

At page 9, line 2, “lateral length” is confusing and appears to be inaccurate since the length direction (see length 49 in Figs. 1, 2 and 4) is oriented along the vehicle’s longitudinal direction, not its lateral direction.

At page 9, line 11, “span the length” is inaccurate since the brackets 46 extend transverse to the length direction (see length 49 in Figs. 1, 2 and 4).

At page 12, line 22, “48” should be “46”.

At page 13, lines 7 and 8, “bows inwardly” and “bowed inwardly” are inaccurate since Figs. 1-4 show the beam 52 bowed outwardly (i.e., away from the air bag 42 and trim panel 38).

At page 15, line 1, “A-A” should be “4-4”.

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At page 15, line 17, page 17, line 16, and page 20, line 9, “will decrease” is inaccurate since, in Figs. 4-6, the inflated lengths 49a, 149a, 249a are greater than the deflated lengths 49, 149, 249.

Appropriate correction is required.

Claim Objections

7. Claims 21, 22, 27, 28, 37, 38, 44, 47-49, 53, 60, 61 and 63 are objected to because:

In claims 21 and 37, at line 1, “when” should be inserted after “wherein”.

In claims 22 and 38, at line 2, “is constructed such that when the when the” should be “such that when the”.

In claims 27, 28, 48, 49, 60 and 61, at line 1, “assembly” should be inserted before “as”.

In claims 44 and 53, at line 2, “is” should be inserted before “between”.

In claim 47, at line 1, “to” should be inserted after “attached”.

In claim 63, at line 2, “a” should be “an”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. Claims 1-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, at line 4, “the inner skin” and “the trim panel” lack proper antecedent basis.

In claims 2-4, at lines 1-2, “the uninflated configuration” lacks proper antecedent basis.

In claim 6, at line 2, “the uninflated configuration” lacks proper antecedent basis.

In claim 8, at line 2, the alternative expression “and/or” renders the claim indefinite. The examiner suggests that this be changed to “or”.

In claim 19, at line 1, “the shell layer” lacks proper antecedent basis. Note that this term is introduced in claim 18.

In claims 21 and 22, at line 1, “A pelvic airbag assembly...” is indefinite because claim 1 does not recite an “assembly”. Note also the term “the airbag assembly” in claim 22, at line 1.

In claim 21, at lines 1-2, “the uninflated configuration” lacks proper antecedent basis.

In claims 22 and 38, “the inflated configuration” (lines 2-3), “the energy” (line 3) and “the crash” (line 3) lack proper antecedent basis.

In claims 24, 25, 40 and 41, “the inflated configuration” (line 2) and “the lateral length” (line 2/lines 2-3) lack proper antecedent basis.

In claims 24 and 25, at line 2, and in claims 40 and 41, at lines 2-3, “lateral length” is confusing and appears to be inaccurate since the length direction (see length 49 in Figs. 1, 2 and 4) is oriented along the vehicle’s longitudinal direction, not its lateral direction.

In claim 26, at line 3, “the uninflated configured” lacks proper antecedent basis and is confusing.

In claim 42, at lines 2-3, “a front panel” is indefinite because it is unclear what the relationship is between this “front panel” and the “front panel” recited at line 2. The examiner suggests: at line 2, change “to a” to “to the”.

In claim 42, “the inner skin” (line 3) and “the trim panel” (line 4) lack proper antecedent basis.

In claim 44, at line 2, “the uninflated configuration” lacks proper antecedent basis.

In claim 52, at line 4, “a vehicle door” is indefinite because it is unclear what the relationship is between this “vehicle door” and the “vehicle door” recited at line 2. The examiner suggests: at line 4, change “a” to “the”.

In claim 53, at line 2, “the uninflated configuration” lacks proper antecedent basis.

In claim 62, at line 2, “the armrest” lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 5, 6, 8, 18, 20-22, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Research Disclosure No. 37513 (“RD 37513”). RD 37513 discloses a vehicle door inner and outer skins 3. A pelvic air bag 1 is retained between the inner skin 3 and a trim panel 2

(which comprises a “shell layer” as broadly claimed). The air bag 1 is comprised of a pair of metal panels and is inflated by an inflator (see the third paragraph of the description). The bladder is designed to be thin when uninflated (see the first paragraph of the description). As shown in Fig. 2 the air bag 1 is substantially rectangular. Due to the manner in which the air bag 1 deploys (compare Figs. 1 and 2), the length of the air bag will decrease slightly when inflated.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 2-4, 12-15, 23, 26-28 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 (“RD 37513”) in view of Glance (US 5,382,051). RD 37513 lacks an air bag folded to an uninflated thickness less than 25 millimeters and having means for attaching the air bag to the inner skin. Glance teaches an air bag 12 having folds 15, 16 which provide the air bag with an uninflated thickness of about 0.5 inch or 12.7 mm (see column 4, lines 5-9). The air bag 12 is provided with brackets 33, 34 (Fig. 9) or heat-staked connectors 58, 59 (Fig. 16) for securing the air bag 12 to a vehicle structure 32, 57. From these teachings of Glance, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to modify RD 37513 by folding the air bag such that it has an uninflated thickness of about 12 mm in order to reduce the space requirements for the air bag, and by providing the air bag with brackets or heat-staked connectors in order to efficiently and reliably secure the air bag to the door inner skin.

With respect to claims 4 and 28, given the teachings of RD 37513 and Glance that thin air bags are advantageous, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further reduce the thickness of the air bag (e.g. to 4 mm) in order to reduce the space requirements for the air bag. Further, such a modification involving a mere change in size is generally recognized as being within the level of ordinary skill in the art.

With respect to claim 31, the examiner takes Official notice that it is well-known to provide vehicles with rubber dampeners (e.g., in the suspension systems) in order to reduce vibration and noise. Therefore, it would have been obvious to modify RD 37513 by providing the vehicle with rubber dampeners to reduce vibration and noise.

14. Claims 7, 52, 54, 57, 58 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 ("RD 37513") in view of Lebaudy et al. (US 6,460,873). RD 37513 lacks an inflator in a housing. Lebaudy et al. teaches an air bag assembly including an inflator 3, 311 in a housing 2, 302. From this teaching of Lebaudy et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify RD 37513 by providing the air bag with an inflator in a housing in order to form a module that can be easily mounted within a vehicle, while protecting the inflator from damage. With respect to claim 62, a portion of RD 37513's air bag is located below the armrest. Further, a modification involving a mere shift in location is generally recognized as being within the level of ordinary skill in the art.

15. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 ("RD 37513") in view of Dancasius et al. (EP 885785). RD 37513 lacks a bowed reaction beam. Dancasius et al. teaches a door with a bowed reaction beam 18 supporting an air bag assembly 22. From this teaching of Dancasius et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify RD 37513 by

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providing a bowed reaction beam in order to reinforce the door during a collision and air bag deployment.

16. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 ("RD 37513") in view of Sakakida et al. (US 6,378,896). RD 37513 lacks a reaction beam and a rubber dampener. Sakakida et al. teaches a door with a dampener 24 positioned between a reaction beam 22 and an air bag assembly 40. From this teaching of Sakakida et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify RD 37513 by providing a dampener positioned between a reaction beam and the air bag assembly in order to reinforce the door and absorb energy during a collision and air bag deployment.

17. Claims 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 ("RD 37513") in view of Spencer et al. (US 6,203,057). RD 37513 lacks brackets and fasteners for securing the air bag. Spencer et al. teaches an air bag 36 that is secured to a vehicle using brackets 52, 54, 60, 62 and fasteners 56. From this teaching of Spencer et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify RD 37513 by providing brackets and fasteners for securing the air bag in order to efficiently and reliably secure the air bag to the door inner skin.

18. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Research Disclosure No. 37513 ("RD 37513") in view of Galbraith et al. (US 5,615,914). RD 37513 lacks an air bag with a shell layer that fits into an aperture in the trim panel. Galbraith et al. teaches an air bag 10 having a surface 28 that fits into an aperture in a door trim panel (see Fig. 4). The surface 28 may be covered with a shell layer (see column 4, lines 19-22). From this teaching of Galbraith et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify RD 37513 by providing the air bag with a shell layer that fits into an aperture in the trim panel in order to minimize the restriction to air bag deployment caused by the trim layer, while matching the interior trim surfaces to one another.

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19. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Glance (US 5,382,051) as applied to claim 26 above, and further in view of Lebaudy et al. (US 6,460,873). The RD 37513 and Glance combination lacks an inflator in a housing. Lebaudy et al. teaches an air bag assembly including an inflator 3, 311 in a housing 2, 302. From this teaching of Lebaudy et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by providing the air bag with an inflator in a housing in order to form a module that can be easily mounted within a vehicle, while protecting the inflator from damage.

20. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Glance (US 5,382,051) as applied to claim 26 above, and further in view of Sakakida et al. (US 6,378,896). The RD 37513 and Glance combination lacks a reaction beam. Sakakida et al. teaches a door with a reaction beam 22 and an air bag assembly 40. From this teaching of Sakakida et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by providing the door with a reaction beam in order to reinforce the door during a collision and air bag deployment.

21. Claims 42, 43, 45, 50, 51 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Lebaudy et al. (US 6,460,873) as applied to claims 7, 52, 54, 57, 58 and 62 above, and further in view of Dancasius et al. (EP 885785). The RD 37513 and Lebaudy et al. combination lacks a bowed reaction beam. Dancasius et al. teaches a door with a bowed reaction beam 18 supporting an air bag assembly 22. From this teaching of Dancasius et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by providing a bowed reaction beam in order to reinforce the door during a collision and air bag deployment.

22. Claims 44 and 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Lebaudy et al. (US 6,460,873) and Dancasius et al. (EP 885785) as applied to claim 42 above, and further in view of Glance (US 5,382,051). The RD 37513, Lebaudy et al. and Dancasius et al. combination lacks an air bag folded to an uninflated thickness less than 25

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millimeters and having means for attaching the air bag to the inner skin. Glance teaches an air bag 12 having folds 15, 16 which provide the air bag with an uninflated thickness of about 0.5 inch or 12.7 mm (see column 4, lines 5-9). The air bag 12 is provided with brackets 33, 34 (Fig. 9) or heat-staked connectors 58, 59 (Fig. 16) for securing the air bag 12 to a vehicle structure 32, 57. From these teachings of Glance, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by folding the air bag such that it has an uninflated thickness of about 12 mm in order to reduce the space requirements for the air bag, and by providing the air bag with brackets or heat-staked connectors in order to efficiently and reliably secure the air bag to the door inner skin.

23. Claims 53 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Lebaudy et al. (US 6,460,873) as applied to claim 52 above, and further in view of Glance (US 5,382,051). The RD 37513 and Lebaudy et al. combination lacks an air bag folded to an uninflated thickness less than 25 millimeters and having means for attaching the air bag to the inner skin. Glance teaches an air bag 12 having folds 15, 16 which provide the air bag with an uninflated thickness of about 0.5 inch or 12.7 mm (see column 4, lines 5-9). The air bag 12 is provided with brackets 33, 34 (Fig. 9) or heat-staked connectors 58, 59 (Fig. 16) for securing the air bag 12 to a vehicle structure 32, 57. From these teachings of Glance, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by folding the air bag such that it has an uninflated thickness of about 12 mm in order to reduce the space requirements for the air bag, and by providing the air bag with brackets or heat-staked connectors in order to efficiently and reliably secure the air bag to the door inner skin.

24. Claims 59-61 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over RD 37513 in view of Lebaudy et al. (US 6,460,873) as applied to claims 52 and 58 above, and further in view of Heinz et al. (US 6,086,091) and Nishitake et al. (US 5,072,966). The RD 37513 and Lebaudy et al. combination lacks a core layer with a hole and/or tear seams. Heinz et al. teaches a trim panel 8 having a core layer and an outer layer formed with a hole for receiving a multi-layer air bag cover 10 having tear seams 22. Nishitake et al. teaches a trim panel 19A

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having a core layer 19A1 and an outer layer 19A2. The core layer 19A1 has tear seams 26A. From these teachings of Heinz et al. and Nishitake et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify RD 37513 by providing the trim panel with a core layer having a hole and/or tear seams in order to improve both the strength and appearance of the trim panel, while allowing for reliable air bag deployment. With respect to claim 63, Heinz et al. teaches an inner skin (see Fig. 2) with an aperture receiving the air bag assembly A.

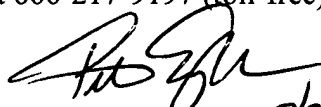
Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamanishi et al. and Bombard teach doors with air bags. JP 06270817 teaches a dampener for an air bag assembly.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 571-272-6671. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Peter C. English 7/20/05
Primary Examiner
Art Unit 3616

pe
20 July 2005